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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,311	12/04/2003	Tadeusz Jaroszczyk	4191-00306	9645

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EXAMINER
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CHIESA, RICHARD L

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/728,311

Applicant(s)

JAROSZCZYK ET AL.

Examiner

Richard L. Chiesa

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date March 8, 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restriction*

1. Applicants' election with traverse of species B (Figures 33-35) in the reply filed on August 18, 2005 is acknowledged. The traversal is on the ground(s) that the application may be most efficiently examined if all groups of species were searched and examined. This is not found persuasive because there are significant differences between the species as evidenced by an inspection of Figures 14-17 and 33-35.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 102/103*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1724

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicants are advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 9-12, and 25 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US. Patent Application Publication No. 2003/0037675 to Gillingham et al. Gillingham et al (note Figures 22-39) show a filter with an upstream prefilter element 222 and a pleated electrostatically charged downstream main filter element 220 having nanofibers (note paragraphs 0041, 0044, 0048, 0053-0055, 0059, 0124-0126, 0161, 0162, 0176, 0194 on pages 3-6, 11, 14, 15, and 17) as claimed (35 USC 102a). It would appear that Gillingham et al may not explicitly state that the assembly is a multi-stage filter. However, Gillingham et al disclose the use of a plurality of filter elements in series and in numerous other configurations (note paragraphs 0123-0152 and 0191-0197 on pages 11-13, 17, and 18). Consequently, in view of Gillingham et al's description, it is inherent or at least would have been obvious to one having ordinary skill in the art (35 USC 103a) that Gillingham et al disclose a multi-stage filter.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillingham et al in view of U.S. Patent No. 4,650,506 to Barris et al. Gillingham et al, as described above in paragraph 5, disclose a multi-stage filter substantially as claimed. It would appear that Gillingham et al may not explicitly disclose a filter basis weight of 0.02 to 1.0 grams per square meter. However, Barris et al teach the well-known use of a filter basis weight of 0.02 to 1.0 grams per square meter in a multi-stage filter (note col. 3, line 56 to col. 4, line 68) for the purpose of maximizing efficiency. It would have been obvious to one of ordinary skill in the art to employ a basis weight of 0.02 to 1.0 grams per square meter in the Gillingham et al multi-stage filter in order to improve efficiency as taught by Barris et al.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 13 in paragraph 6 above, and further in view of U.S. Patent No. 6,387,144 to Jaroszczyk et al. The prior art as described above in paragraph 6 discloses a multi-stage filter substantially as claimed with the apparent exception of subsheets. However, Jaroszczyk et al (note col. 3, lines 5-37 and col. 13, lines 12-42) teach the well-known use of subsheets in a multi-stage filter for the purpose of increasing contaminant cake stability and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in the prior art multi-stage filter.

8. Claims 15-24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillingham et al in view of U.S. Patent No. 6,387,144 to Jaroszczyk et al. Gillingham et al, as

Art Unit: 1724

described above in paragraph 5, disclose a multi-stage filter substantially as claimed. Apparently, Gillingham et al may not explicitly disclose tribologically different fibers in the filter. However, Jaroszczyk et al (note col. 6, line 61 to col. 9, line 44) teach the well-known use of tribologically different fibers in a multi-stage filter for the purpose of enhancing triboelectric effect. Consequently, it would have been obvious to one having ordinary skill in the art to employ tribologically different fibers in the Gillingham et al multi-stage filter in order to improve triboelectric effect as taught by Jaroszczyk et al.

9. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,387,144 to Jaroszczyk et al in view of U.S. Patent Application Publication No. 2003/0037675 to Gillingham et al. Jaroszczyk et al (note Figures 7-13) disclose a multi-stage filter (note col. 6, line 61 to col. 9, line 44) with a pleated filter element 80 having tribologically different fibers which apparently may be employed as either the prefilter stage or main filter element (note col. 7, lines 52-56) substantially as claimed. In any case, Gillingham et al, as described above in paragraph 5, teach the well-known use of an electrostatically charged filter having nanofibers as the main filter element of a multi-stage filter for the purpose of ensuring maximum capture of particulates. Therefore, it would have been readily obvious to one having ordinary skill in the art to employ an electrostatically charged filter element having nanofibers in the Jaroszczyk et al multi-stage filter in order to improve particulate capture as taught by Gillingham et al.

Art Unit: 1724

10. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,375,700 to Jaroszczyk et al in view of U.S. Patent Application Publication No. 2003/0037675 to Gillingham et al. Jaroszczyk et al (note Figure 2, and col. 1, lines 13-21) show a direct flow filter substantially as claimed. Apparently, Jaroszczyk et al may not explicitly mention the use of nanofibers in the filter. In any case, Gillingham et al, as discussed above in paragraph 5, teach the well-known use of nanofibers in a filter for the purpose of ensuring maximum particulate capture. It would have been obvious to one of ordinary skill in the art to employ nanofibers in the Jaroszczyk et al direct filter in order to facilitate the removal of all particulates as taught by Gillingham et al.

11. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 27 in paragraph 10 above, and further in view of U.S. Patent Application Publication No. 2003/0217534 to Krisko et al. The prior art as described above in paragraph 10 discloses a direct flow filter substantially as claimed with the apparent exception of a downstream safety filter. However, Krisko et al teach the use of a downstream safety filter (note ref. num. 20, Figs. 2, 4, 11-14, 16, 20) in a filter assembly for the purpose of ensuring protection from debris (note paragraph 0083 on page 6) and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in the prior art filter.

12. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 28 in paragraph 10 above, and further in view of U.S. Patent No. 4,650,506 to Barris et al. The prior art as described above in paragraph 10 disclose a filter

Art Unit: 1724

substantially as claimed with the apparent exception of specific basis weights and permeabilities. However, Barris et al teach the well-known use of these weights and permeabilities (note col. 3, line 36 to col. 4, line 68) in a filter for the purpose of increasing filter capture and enhancing flow and for these same reasons it would have been obvious to one having ordinary skill in the art to employ such expedients in the prior art filter.

13. Claims 34 ad 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 27 in paragraph 10 above, and further in view of U.S. Patent No. 6,387,144 to Jaroszczyk et al. The prior art as described above in paragraph 10 discloses a filter substantially as claimed with the exception of tribologically different fibers. However, Jaroszczyk et al as described in paragraph 8 teaches the well-known use of this expedient in a filter in order to improve triboelectric effect and for this same reason it would have been obvious to one of ordinary skill in the art to employ such an expedient in the prior art filter.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. These references have been cited as art of interest to show other filter systems.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (571) 272-1154.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane S. Smith, can be reached at (571) 272-1166.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (571) 272-1700.

Art Unit: 1724

Facsimile correspondence must be transmitted through (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Chiesa  
September 13, 2005

*Richard L. Chiesa*

**RICHARD L. CHIESA  
PRIMARY EXAMINER  
ART UNIT 1724**

*Sept. 13, 2005*